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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,773	05/29/2001	Rolf Steiger	ICH 292	7734

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

7

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,773

Applicant(s)

STEIGER ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's response filed on 10/15/2002 has been fully considered. Claim 17 is amended, and claims 1-19 are pending. Claim 19 is withdrawn from consideration as a non-elected invention.

Election/Restrictions

2. Applicant's election with traverse of Group I, claims 1-18 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that the two distinct groups can be searched in a single search area. This is not found persuasive because examining the two distinct groups would require the examiner to search in two different search areas those are class 428 and class 524. Searching in two different search areas would seriously burden the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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OK
a. In claim 1, it is not clear if the mixture of different water insoluble is a mixture of (i) and (ii), (i) and (iii), (ii) and (iii), (i) and (i), (ii) and (ii), (i) and solvent, (ii) and solvent, and (iii) and solvent. Clarification of the mixture is kindly requested.

OK
b. In claim 17, "atomic number of 57-57 is indefinite. Clarification of the term is kindly requested.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Keep
6. Claims 1-4, 9-16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Mishima (US 6,183,851).

Mishima discloses an ink jet recording medium comprising at least one coating layer provided on a support (col. 2, line 32). The outer layer of the at least one coating layer (hereinafter the coating layer) comprises inorganic pigments of alumina, silica and/or mullite [equivalent to the claimed aluminum silicate] (col. 8, lines 24-33). The silica may be spherical and porous (col. 8, line 36 and 45). The silica has an average particle diameter of 4-120 milli-micrometer or 4-120 nm (col. 8, line 42), and has a pore

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volume of 0.5-3 cc/g (col. 8, line 49). Since Mishima is silent as to what percentage of the silica has the above pore volume the examiner interprets that 100% of the silica has the above pore volume. The alumina can be γ -alumina or δ -alumina, and has an average particle diameter of 4-300 milli-micrometer or 4-300 nm (col. 8, line 61). The alumina can be porous, and has a pore volume of 0.3-3 cc/g (col. 8, line 67). Since Mishima is silent as to what percentage of the alumina has the above pore volume the examiner interprets that 100% of the alumina has the above pore volume. A binder such as gelatin, polyvinyl alcohol or polyvinyl pyrrolidone (col. 9, line 63) is contained in the coating layer (col. 11, line 48). The coating further comprises silicone dioxide and aluminum oxide as a matting agent (col. 13, line 25). The examiner interprets the silica as positively charged silica because the coating layer contains cationic surface active agents (col. 15, line 62) which would positively charge the silica.

As to the claimed diameters of the primary particles having the largest volume and the smallest volume in claims 2, the diameter for the particles having the smallest volume is equal to the diameter of the particles having the largest volume when the given ratio is 20/20. At least 1/20 includes 20/20, therefore, $20/20 * 20\text{nm} = 20\text{nm}$.

As to the claimed diameters of the primary particles having the largest volume and the smallest volume in claims 4, the diameter for the particles having the smallest volume is equal to the diameter of the particles having the largest volume when the given ratio is 10/10. At least 1/10 includes 10/10, therefore, $10/10 * 15\text{nm} = 15\text{nm}$.

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- withdraw
in view of
an amendment*
7. Claims [✓]1, [✓]3, [✓]10, [✓]15, [✓]16 and [✓]18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kohno et al. (US 6,383,611).

Kohno discloses ink jet recording sheet having a support and an ink receiving layer comprising a pigment and a binder (col. 4, line 25). The pigment can be a mixture of silica, alumina, aluminum silicate, and/or aluminum hydroxide (col. 4, lines 30-45). The pigment can be porous. The silica has a pore volume of 0.8 to 2.00 ml/g (col. 5, line 27). Since Kohno is silent as to what percentage of the silica has the above pore volume the examiner interprets that 100% of the silica has the above pore volume. The ink receiving layer contains binder such as gelatin, polyvinyl alcohol, polyvinyl derivative, and polyvinyl pyrrolidone (col. 6, line 53).

- withdraw
in view of
amendment*
8. Claims [✓]1, [✓]3, [✓]10, [✓]12 and [✓]18 are rejected under 35 U.S.C. 102(e) as being anticipated by Schliesman et al. (US 6,129,785).

Schliesman discloses an ink jet recording medium having a substrate and a coating composition comprising a silica pigment, a binder and a cationic fixing agent (col. 2, line 34). The pore volume of silica is 0.4-2.2 cc/g (col. 3, line 52). Polyvinyl alcohol is an acceptable binder (col. 4, line 37). The examiner interprets the silica as positively charged silica because the coating composition contains cationic fixing agents, which would positively charge the silica. Since Schliesman is silent as to what percentage of the silica has the above pore volume the examiner interprets that 100% of the silica has the above pore volume. The coating composition further contains aluminum oxide and aluminum trihydrate (col. 4, line 62).

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9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 3, 10, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura et al. (US 5,856,001).

Okumura discloses an ink jet recording medium having an ink receiving layer comprising inorganic pigments of aluminum silicate, alumina and/or aluminum hydroxide (col. 6, line 7), and a binder such as gelatin, polyvinyl alcohol, polyvinyl derivative, and polyvinyl pyrrolidone (col. 6, line 17). The ink receiving layer also includes silica as the inorganic pigment. The silica has a pore volume of 1.5 ml/g or less (col. 10, line 61). Since Okumura is silent as to what percentage of the silica has the above pore volume the examiner interprets that 100% of the silica has the above pore volume.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 703-305-0389. The examiner can normally be reached on Mon.-Thur. 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on 703-308-0449. The fax phone numbers

Withdrawn
in view of
amendment

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for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

BS. BS

Dec. 14, 2002

~~CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700~~

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Cynthia H. Kelly